



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/374,580 | 08/16/99 | FURUKAWA | T 862.3016 |

005514 MMC2/0827
FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK NY 10112

EXAMINER

NOLAN JR, C

ART UNIT

PAPER NUMBER

2854

//

DATE MAILED: 08/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/374,580

Applicant(s)

FURUKAWA ET AL.

Examiner

Charles H Nolan, Jr.

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 51 and 52 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 38-45 is/are allowed.
- 6) ☒ Claim(s) 1-37 and 46-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Newly submitted claims 51-52 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Claims 51-52 recite a method for reporting a condition of a print head. It is noted that the method can be practiced in any one of known printing systems other than a thermal inkjet printer.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 51-52 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-19,25-37 and 46-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Imai (5,851,075).

With respect to Claims 1,10,17,25-26,28,33-37 and 46,50, Imai teaches the driver 5, the sensor 3, the A/D converter 8 in figure 3. It is noted that the electrical connection for the driver A/D converter and sensor 3 are all provided on the substrate 4 as broadly recited in Claims 1 and 46. Further, Imai teaches in column 6, lines 25-26 that the digital

Art Unit: 2854

signals are outputted outside the print head to CPU 30 via cable 7 in figure 3. With special note to Claim 17, Imai teaches that the information is read from a ROM memory to control printing in column 5, lines 10-60. Further, Claim 17 is an apparatus claim and the recitation appearing after "wherein" recites only the desired mode of operation and does not recite a structure with which the Examiner can compare to the prior art. With respect to Claims 47-49, these claims recite the current path(circuitry) if Imai. It is noted that in order for the inkjet printer of Imai to work power(current or voltage) must be supplied to the electrical components of Imai's driving circuits. With respect to Claims 2,11,18-19, it is noted that transistors, latch circuits, heaters, switches, discharge nozzles and shift registers are inherent in Imai. With respect Claims 3,12,29, Imai's information consist of the temperature of the print head(substrate) as taught in his Claim 1. With respect to Claims 4,13, Imai teaches in column 6, lines 54-56 that the sensor may be a diode. P-N junction are known in diode technology. With respect to Claims 5-8,14-16,30-31, Imai teaches a ROM memory to store values corresponding to thermistor values and controlling the driving voltages in column 5, lines 9-12. With respect to Claims 9,27, an ink tank is an unavoidable necessary part of an inkjet printer.

Allowable Subject Matter

4. Claims 38-45 are allowed.
5. Claims 20-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2854

Respons to Arguments

6. Applicant's arguments with respect to claims 1-50 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles H Nolan, Jr. whose telephone number is 703-308-0961. The examiner can normally be reached on Monday through Thursday 8:00 AM to 6:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John S Hilten can be reached on 703-308-0719. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-308-5841 for After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.



CHN
August 20, 2001



JOHN S. HILTEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800